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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,275	02/21/2002	Amardeep Singh	1030-20003	3048

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HOUSTON, TX 77253-3267

EXAMINER

DANG, HOANG C

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,275

Applicant(s)

SINGH ET AL.

Examiner

Hoang Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-64 is/are pending in the application.
- 4a) Of the above claim(s) 58-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 58-64 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/21/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 23-57) in Paper No. 4 is acknowledged. The traversal is on the ground(s) that it would not be unduly burdensome for the examiner to search both Groups of claims. This is not found persuasive because the examination involves more than just searching. Further, the elected invention contains several species that clearly are a burden for the examiner.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 58-64 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 4.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 32, 40 and 43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear what is meant by "a fillet surface" in claim 32, "a revolved shape" in claim 40 and "said first leg is backturned" in claim 43.

Claim Objections

5. Claims 26, 37, 40, 48, 50, 51, 52 and 57 are objected to because of the following informalities: Claim 26, line 4, the word "is" before "forms" should be deleted. Claim 37 is identical to claim 36, Claim 40, "ahs" should be --has--. Claim 48, "said angle" has no antecedent basis (it appears that claim 48 is meant to depend on claim 47). In claims 50, 51 and 52, the word "ram" should be --ramp--, respectively. In claims 49, 50, 51 and 52, the term "said bottom of said nozzle boss" in these claims has no antecedent basis. Claim 57 is identical to claim 56.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 23, 24, 25, 28, 29, 30, 31, 32, 33, 34, 38, 40, 41, 43, 44, 46, 49, 50, 52, 53, 54 and 55 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Zadraba et al (US 6,227,314) (see "mud ramp surface" 25 and "junk slot" defined between surfaces 25 and 27).

8. Claims 23, 24, 25, 28, 29, 30, 31, 32, 33, 34, 39, 40, 41, 43, 44, 47, 49, 50 and 52 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nguyen (US 5,494,123) (see "mud ramp" 48 Figures 1-2) or Coates (Re.32,495) (see "mud ramp" 22 Figures 1-3).

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9. Claims 23, 24, 25, 34-38, 40, 41, 43, 44, 46, 49, 50, 52, 53, 56 and 57 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Swadi et al (US 5,890,550) (see figures 1-3)..

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 39, 47 and 48 (assuming that it depends from claim 47) are rejected under 35 U.S.C. 103(a) as being unpatentable over Zadraba et al '314 or Swadi et al '550 in view of Nguyen (US 5,494,123) or Coates (Re. 32,495).

Zadraba et al or Swadi et al disclose the invention as claimed except for the shape of the bit body is not conical or the backface is not tapered. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Zadraba et al or Swadi et al with a conical bit body or a tapered backface as claimed because it is well known to make the bit body in such a manner to facilitate the flow of drilling mud and cuttings as evidenced by Nguyen '123 (see figures 1-2) or Coates '495 (see figures 1-4).

12. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zadraba et al or Nguyen or Coates or Swadi et al.

Zadraba et al or Nguyen or Coates or Swadi et al disclose the invention as claimed except that it is not disclosed that the cross-sectional area of the junk slot at the top of the mud ramp is at least 100% greater than that at the bottom of the nozzle boss. However, it would have been

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obvious to one of ordinary skill in the art at the time the invention was made to use the claimed range in Zadraba et al or Nguyen or Coates or Swadi et al since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Allowable Subject Matter

13. Claims 26, 27, 42 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Dang whose telephone number is 703-308-2149. The examiner can normally be reached on 9:15-5:45 Monday-Friday.

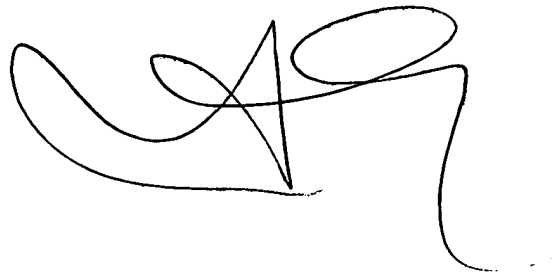
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bagnell can be reached on 703-308-2151. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3597 for regular communications and 703-305-3597 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

Hoang Dang
Primary Examiner
Art Unit 3672

10081275.1rej
May 18, 2003

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke at the bottom.